PR-24. REACTION OF SODIUM 4-ACETYL-1-PHENYL-1*H*-1,2,3-TRIAZOL-5-OLATE WITH 1,2,3-THIADIAZOLE-4-CARBOXYLIC ACID HYDRAZIDE

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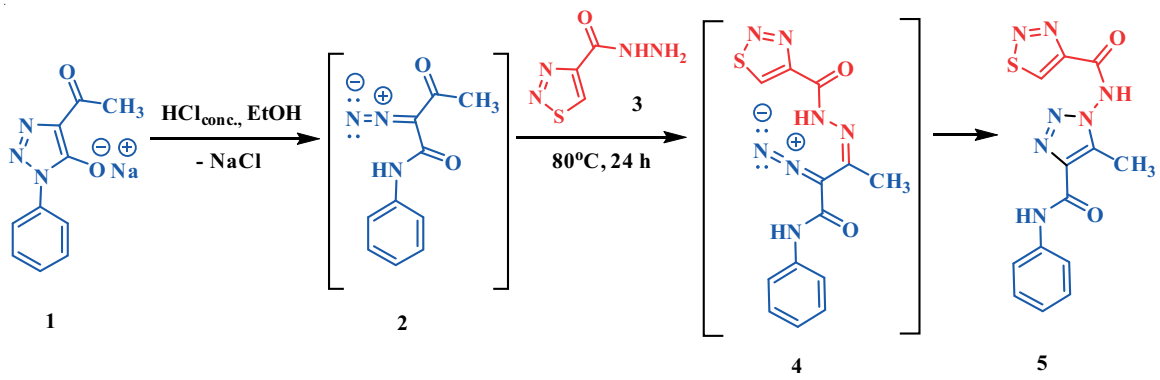
Compounds bearing the 1,2,3-thiadiazole ring possess herbicidal, fungicidal and phytohormonal properties [1, 2]. At the same time, it has been found that the 1,2,3-triazole derivatives exhibit antimicrobial, antiviral and antitumoral activities [3].

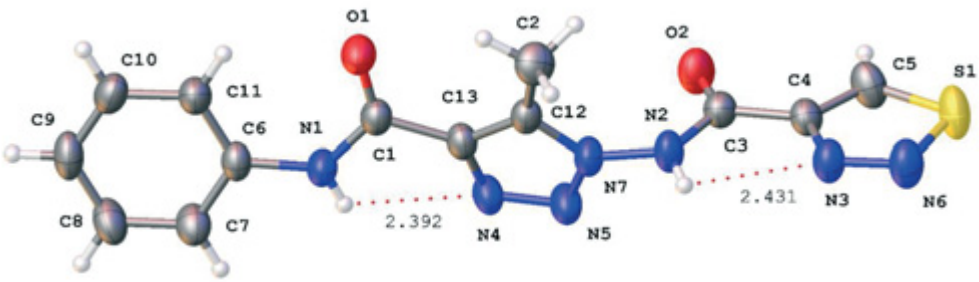
The aim of the present work was a synthesis of previously undescribed 1,2,3-thiadiazole-1,2,3-triazole hybrid possessing valuable properties of both heterocycles.

Acidification of 1,2,3-triazolium-5-olate **1** led to opening of the triazole ring and formation of α-diazoacetamide **2**. The latter underwent condensation with 1,2,3-thiadiazole-4-carboxylic acid hydrazide **3**, affording the corresponding hydrazone **4**. Following this, interaction between diazo group and NH hydrazide moiety resulted in cyclization of hydrazone with formation of 1,2,3-triazolyl-carboxamide-1,2,3-thiadiazole **5** (Scheme).



Pathway for the synthesis of *N*-1,2,3-triazol-1-yl-1,2,3-thiadiazol-4-carboxamide **5**

The structure of synthesized compound was characterized by spectroscopic methods such as ^{1}H NMR, ^{13}C NMR, IR, mass spectrometry and X-ray diffraction.



Intramolecular hydrogen bonds in crystal structure of the compound **5**

References

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